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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,852	03/23/2004	David C. Rueger	JJJ-P02-511	2484

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EXAMINER	
WANG, CHANG YU	
ART UNIT	**PAPER NUMBER**
1649	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/25/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/806,852	RUEGER ET AL.	
	Examiner	Art Unit	
	Chang-Yu Wang	1649	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 November 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *10,12,19,21 and 24-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *10,12,19,21 and 24-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *9/23/04* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *6/29/04,12/03/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Status of Application Election/Restrictions

Applicant's election with traverse of Group II, SEQ ID NO:2 in the reply filed on November 3, 2006 is acknowledged. The traversal is on the ground(s) that examining all the claims is not a serious burden to the examiner because all the claims are classified in the same class/subclass. In addition, Applicant argues that the restriction of the instant application is not consistent with the parent application because the claims directed to methods of treating amyotrophic lateral sclerosis and spinal cord injury in the parent case were examined together. Applicant argues that all the sequences were examined together in the parent application. Although each application is examined and judged by its own merits and it would require separate searches and analyses on the prior art because the cause, patients and treatment are different between Amyotrophic lateral sclerosis and spinal cord injury, Applicant's arguments are persuasive. The restriction requirement on different diseases and sequences is withdrawn. Therefore, the subject matter to the extent of amyotrophic lateral sclerosis and SEQ ID NOs: 3-7 will be examined in this office action.

Claims 1-9, 11, 13-18, 20, 22-23 are canceled. Claims 10, 12, 19, 21, 24-27 are pending and under examination in this office action.

Claim Objections

Claims 10 and 12 are objected to as encompassing non-elected subject matter.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 10, 12, 19, 21, 24-27 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for inducing dendritic arbors, neurite outgrowth, neuronal survival by OP-1 (BMP-7) in animals intra-ocularly grafted with embryonic spinal cord and animals with fluid-percussion brain injury, does not reasonably provide enablement for a method of preserving motor function in a mammal with symptoms or at risk of amyotrophic lateral sclerosis and spinal cord injury with a morphogen comprising an amino acid sequence selecting from a conserved C-terminal seven-cysteine skeleton that is at least about 60% identical and 70% homologous to residues 330-431 of human OP-1 (SEQ ID NO:2) or generic sequences SEQ ID NOs: 3-7 or other morphogens as recited in the claims as broadly claimed. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make or use the invention commensurate in scope with these claims.

"There are many factors to be considered when determining whether there is sufficient evidence to support a determination that a disclosure does not satisfy the enablement requirement and whether any necessary experimentation is 'undue'. These factors include, but are not limited to:

(A) The breadth of the claims;

(B) The nature of the invention;

(C) The state of the prior art;

(D) The level of one of ordinary skill;

(E) The level of predictability in the art;

(F) The amount of direction provided by the inventor;

(G) The existence of working examples; and

(H) The quantity of experimentation needed to make or use the invention based on the content of the disclosure.

In re Wands, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988)". See MPEP § 2164.01.

Claims 10, 19, 24 and 25 are drawn to a method of preserving motor function in a mammal with symptoms or at risk of amyotrophic lateral sclerosis with a morphogen comprising an amino acid sequence selecting from a conserved C-terminal seven-cysteine skeleton that is at least about 60% identical and 70% homologous to residues 330-431 of human OP-1 (SEQ ID NO:2) or generic sequences SEQ ID NOs: 3-7 or other morphogens. Claims 12, 21, 26 and 27 are directed to a method of preserving motor function in a mammal with symptoms or at risk of spinal cord injury with a morphogen comprising an amino acid sequence selecting from a conserved C-terminal seven-cysteine skeleton that is at least about 60% identical and 70% homologous to residues 330-431 of human OP-1 (SEQ ID NO:2) or generic sequences SEQ ID NOs: 3-7 or other morphogens.

The nature of the invention is a method of preserving motor function in a mammal with symptoms or at risk of ALS or spinal cord injury by administration of OP-1 to the mammal. This is complex because it requires that a single molecule (OP-1) causes the restoration of intricate circuitry comprised of many different neural cell types with many interconnections in brains and in spinal cords that have 'lost integrity' via disease or pre-disease states. Alternatively this single molecule (OP-1) must prevent all degeneration associated with ALS and spinal cord injury which includes not only motor neurons but also other types of neurons involved in motor tracts including the pyramidal motor system (upper motor neurons in primary motor cortex and lower motor neurons in the anterior horn of the spinal cord), extrapyramidal motor system (basal ganglia, substantia nigra, thalamus, subthalamic nucleus and red nucleus) and vestibular system (lateral vestibulospinal, vestibuloocular and vestibulocortical neurons) and cerebellum (spinocerebellar, vestibulospinal and corticopontocerebellar tracts to connect the cerebellum with other parts of brains) (see Motor systems from the web site: pathology.mc.duke.edu/neuropath/nawr/motor-systems.html, retrieved Jan 17, 2007). However, the state of the prior art is such that no treatment or administration was known to prevent neurodegeneration or restore motor dysfunction caused by neurodegeneration and let alone maintain the integrity of the motor tract pathways to preserve all the motor functions in a mammal with symptoms of or at risk of ALS or spinal cord injury. In addition, the pathogenesis of ALS is multifactorial. Based on current understanding, it could be due to autoimmune problem against to certain Ca2+ channels, excitotoxicity of glutamate derived from the dysfunction of glutamate

transporter, oxidative stress or neurofilament/cytoskeletal abonormalities (Rothstein Curr. Opin. In Neurobiol. 1996. 6: 679-687). Thus, it is unpredictable how much damage of neural tracts or neurons in motor tracts would occur and subsequently would affect the motor function of a patient.

Based on the specification, Applicant is enabled for enhancing neural development by OP-1 in vivo. However, it involves more than enhancing neural survival and dendritic development to preserve motor function in a mammal with neurodegeneration or symptoms associated with ALS or damaged spinal cord. It requires reconnecting the different types of damages neurons along with the motor tracts and reestablishing synaptic plasticity of the brain and spinal cord. Applicant fails to demonstrate that these morphogens are able to preserve motor function due to neurodegeneration caused by ALS or spinal cord injury in a patient or animal since motor function involves more than neural survival. In addition, it is known in the art that morphogens are important in axon guidance and have different activities due to their gradient effects in the brain (Charron et al. Development 2005. 132: 2251-2262). For example, Sonic hedgehog (Shh) needs to coordinate with BMP in cell fate determination and axon guidance. Shh functions as a chemoattratant for commissural axons to cross the midline and BMP7:GDF7 heterodimers mediate chemorepellent activity to collapse growth cone and guide commissural axons into the right trajectory in the developing spinal cord (p. 2253 and 2256). It would require knowledge of understanding the molecular mechanisms underlying the interconnection of the motor tracts and specific neurons that are involved the function of the entire motor system and further use the

knowledge to evaluate whether all the motor functions could be preserved by the claimed morphogens. However, neither the prior art nor the specification provides the information. Applicant fails to show that a morphogen comprising a conserved C-terminal seven-cysteine skeleton, at least about 60% identity and 70% homologous to residues 330-431 of OP-1 (SEQ ID NO:2) or SEQ ID NOs: 3-7 is able to preserve the motor function of patients with symptoms of ALS or spinal cord injury in vivo.

In addition, the claims recite "at risk of ALS or spinal cord injury" in claims 10, 12, 19, and 21. However, Applicant fails to provide sufficient guidance as to how to prevent those at risk of developing ALS or spinal cord injury from developing the disease by administration of the claimed morphogens with limited homology since each one of us could develop the disease or be injured at any time and it is unpredictable when we would develop the disease and when we would be at risk and would require the treatment.

Moreover, Applicant has not provided sufficient guidance as to enable one skilled in the art to make and/or use a morphogen as recited in the claims to preserve motor function in ALS and spinal cord injury in vivo. Applicant is enabled for using OP-1/SEQ ID NO:2 to induce synapse formation or dendrite outgrowth in vitro or in vivo. However, Applicant fails to teach whether morphogens with limited homology to aa. 330-431 of SEQ ID NO:2 or morphogens having the generic sequences SEQ ID NOs:3-7 have the same activity as SEQ ID NO:2 to enhance neural development or synapse formation in motor neurons or other types of neurons that are involved in motor tract pathways. Since a change of amino acid residue of a protein could abolish the binding ability of the

protein, it is unpredictable whether these morphogens with limited homology could be used to preserve motor function in patients with ALS or spinal cord injury. It is known in the art that a change of an amino acid in an amino acid sequence can change the protein conformation, which consequently changes the binding ability of the polypeptide/peptide to its binding partner or receptors. For example, a substitution of lysine residue by glutamic acid at position 118 of acidic fibroblast growth factor results in a substantial loss of its biological activity including the binding ability to heparin and its receptor (Burgess et al. J of Cell Bio. 1990. 111:2129-2138). It is also known in the art that in addition to a core determinant sequence, the protein-protein interaction also relies on the flanking or noncontiguous residues (see p. 445 the second column, first paragraph, Pawson et al. 2003, Science 300:445-452). The optimal binding motif for a domain is not necessarily suitable for physiological or in vivo interaction. The predictive data always need to be validated by actual analyses in cells (see p. 445, the third column, second paragraph, Pawson et al. 2003, Science 300:445-452). Applicant fails to teach what other amino acids could/could not be included/changed in these claimed morphogen that have limited homology to aa 330-431 of SEQ ID NO:2 or have generic sequences as SEQ ID NOs:3-7. Applicant has not provided sufficient guidance as to enable one of skill in the art to practice the full scope of the invention. Therefore, in view of the necessity of experimentation, the limited working examples, the unpredictability of the art, and the lack of sufficient guidance in the specification, it would require more undue experimentation to practice the claimed invention as it pertains to a method of preserving motor function in a mammal with symptoms or at risk of amyotrophic lateral

sclerosis with a morphogen comprising an amino acid sequence selecting from a conserved C-terminal seven-cysteine skeleton that is at least about 60% identical and 70% homologous to residues 330-431 of human OP-1 (SEQ ID NO:2) or generic sequences SEQ ID NOs: 3-7 or other morphogens..

Claims 10, 12, 24-27 are also rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

To provide adequate written description and evidence of possession of a claimed genus, the specification must provide sufficient distinguishing identifying characteristics of the genus. The factors to be considered include disclosure of complete or partial structure, physical and/or chemical properties, functional characteristics, structure/function correlation, methods of making the claimed product, or any combination thereof.

Claims 10, 24, 25 are directed to a method of preserving motor function in a mammal with symptoms of or at risk of amyotrophic lateral sclerosis by administration to the mammal a morphogen. Claims 12, 21,26 and 27 directed to a method of preserving motor function in a mammal with symptoms of or at risk of spinal cord injury by administration to the mammal a morphogen. The claims recite a morphogen comprising at least 70 % homology or 60% sequence identity with the C-terminal seven-cysteine skeleton of human OP-1, residues 330-431 of SEQ ID NO:2 and generic sequences

SEQ ID NOs: 3-7. While the claims do require a particular biological activity, there is no clear nexus between, nor any other particular conserved structure, or other disclosed distinguishing feature. Thus, the claims are drawn to a genus of polypeptides that is defined only by sequence identity. In making a determination of whether the application complies with the written description requirement of 35 U.S.C. 112, first paragraph, it is necessary to understand what Applicant has possession of and what Applicant is claiming. From the specification, it is clear that Applicant is in possession of SEQ ID NO:2 and other morphogens as in claims 19 and 21. However, the claims are not limited to the morphogens as set forth above and Applicant is not in possession of all morphogens as in claims 10 and 12 that could be used in the claimed method. Although the specification describes several morphogens as in claims 19 and 21, Applicant fails to teach or describe what other structures/characteristics are required for the claimed genus of OP-1 related morphogens that could be used in the claimed method. There is no identification of any particular portion of the structure that must be conserved. The instant specification fails to provide sufficient descriptive information, such as definitive structural or functional features of the claimed genus of OP-1 related polypeptides. While a species sequence is provided, there is merely a set of common properties: there is no description of the conserved regions, which are critical to the function of the claimed genus. There is no description of the sites at which variability may be tolerated and there is no information regarding the relation of structure to function; i.e. there is no guidance of other structural features that could distinguish the claimed polypeptides in the genus from other polypeptides that are missing from the disclosure. Since the

common characteristics/features of OP-1 homologues are unknown, a skilled artisan cannot contemplate the functional correlations of the claimed genus with the claimed invention. Accordingly, in the absence of sufficient recitation of distinguishing identifying characteristics, the specification does not provide adequate written description of the genus of proteins.

Vas-Cath Inc. v. Mahurkar, 19USPQ2d 1111, clearly states "applicant must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession *of the invention*. The invention is, for purposes of the 'written description' inquiry, *whatever is now claimed.*" (See page 1117.) The specification does not "clearly allow persons of ordinary skill in the art to recognize that [he or she] invented what is claimed." (See *Vas-Cath* at page 1116). As discussed above, the skilled artisan cannot envision the detailed chemical structure of the encompassed genus of polypeptides, and therefore conception is not achieved until reduction to practice has occurred, regardless of the complexity or simplicity of the method of isolation. Adequate written description requires more than a mere statement that it is part of the invention and reference to a potential method of isolating it. The compound itself is required. See *Fiers v. Revel*, 25 USPQ2d 1601 at 1606 (CAFC 1993) and *Amgen Inc. v. Chugai Pharmaceutical Co. Ltd.*, 18 USPQ2d 1016.

One cannot describe what one has not conceived. See *Fiddes v. Baird*, 30 USPQ2d 1481 at 1483. In *Fiddes*, claims directed to mammalian FGF's were found to be unpatentable due to lack of written description for that broad class. The specification provided only the bovine sequence.

Therefore, methods of preserving motor function in a mammal with symptoms of or at risk of amyotrophic lateral sclerosis and spinal cord injury by administration to the mammal a morphogen with limited homology to residues 330-431 of SEQ ID NO:2 or a morphogen with generic sequences SEQ ID NO:3-7 have not met the written description provision of 35 U.S.C. §112, first paragraph. Applicant is reminded that *Vas-Cath* makes clear that the written description provision of 35 U.S.C. §112 is severable from its enablement provision (see page 1115).

Applicant is directed to the Guidelines for the Examination of Patent Applications Under the 35 U.S.C. 112, ¶ 1 "Written Description" Requirement, Federal Register, Vol. 66, No. 4, pages 1099-1111, Friday January 5, 2001.

Obviousness-Type Non-Statutory Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., In re Berg, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); In re Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); In re Longi, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); In re Van Ornum, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); In re Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and In re Thorington, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 10, 12, 19, 21, 24-26 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-16 of U.S. Patent No. 6723698. Although the conflicting claims are not identical, they are not patentably distinct from each other. Claims 10, 12, 19, 21, 24-26 encompass a method of preserving motor function in a mammal with symptoms or at risk of amyotrophic lateral sclerosis and spinal cord injury using a morphogen comprising an amino acid sequence selecting from a conserved C-terminal seven-cysteine skeleton that is at least about 60% identical and 70% homologous to residues 330-431 of human OP-1 (SEQ ID NO:2) or generic sequences SEQ ID NOs: 3-7 or other morphogens. Claims 1-16 of '698 encompass a method of treating ALS and spinal cord injury and a method of improving motor function in a mammal with symptoms or at risk of ALS and spinal cord injury using a morphogen comprising an amino acid sequence selecting from a conserved C-terminal seven-cysteine skeleton that is at least about 60% identical and 70% homologous to residues 330-431 of human OP-1 (SEQ ID NO:2) or generic sequences SEQ ID NOs: 3-7 or other morphogens. Claims 10, 12, 19, 21, 24-26 of the instant application are unpatentable over claims 1-16 of '698 because the morphogens used in claimed method of the instant case are substantially identical to the morphogens in issued patents and overlap in scope. Thus, the instant claims and the claims of issued patents encompass a non-distinct invention with a scope substantially overlapping with each other.

Claims 10, 12, 19, 21, 24-26 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 97, 99, 105-108, 112 and 113 of copending Application No. 08/937756 and claims 50 and 51 of copending Application No.10/865514. Although the conflicting claims are not identical, they are not patentably distinct from each other. Claims 10, 12, 19, 21, 24-26 encompass a method of preserving motor function in a mammal with symptoms or at risk of amyotrophic lateral sclerosis and spinal cord injury using a morphogen comprising an amino acid sequence selecting from a conserved C-terminal seven-cysteine skeleton that is at least about 60% identical and 70% homologous to residues 330-431 of human OP-1 (SEQ ID NO:2) or generic sequences SEQ ID NOs: 3-7 or other morphogens. Claims 97, 99, 105-108, 112 and 113 of '756 encompass a method for decreasing neuronal cell death associated with a neuropathy or chemical/physical injury comprising administration fragments and full length of OP-1 and other morphogens as in the instant claims. Claims 50 and 51 of '514 encompass a method of enhancing recovery of central nervous system function in a mammal afflicted with a CNS injury by administration to the mammal a morphogen comprising an amino acid sequence selecting from the generic sequences and morphogens as in instant claims. Claims 10, 12, 19, 21, 24-26 of the instant application are unpatentable over Claims 97, 99, 105-108, 112 and 113 of '756 and claims 50 and 51 of '514 because the morphogens in the claimed methods are substantially identical and overlap in scope and. In addition, the limitation of neuronal death in neuropathy or injury as in '756 also

occurs in ALS and spinal cord injury. Furthermore, the CNS injury in '514 also includes ALS and spinal cord injury (see p.3, [0023]). Thus, the instant claims and the claims of copending applications encompass a non-distinct invention with a scope substantially overlapping with each other.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

A search of inventors' names indicates that Applicant has filed several related applications. The rejections set forth above only cover some of applications. It is incumbent on the applicant to inform the office of all related subject matter and to file all related terminal disclaimers. See 37 CFR 1.56, Duty to disclose information material to patentability.

Conclusion

NO CLAIM IS ALLOWED.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry of a general nature or relating to the status of this general application should be directed to the Group receptionist whose telephone number is (571) 272-1600.

Papers relating to this application may be submitted to Technology Center 1600, Group 1649 by facsimile transmission. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). Should applicant wish to FAX a response, the current FAX number for Group 1600 is (571) 273-8300.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chang-Yu Wang, Ph.D. whose telephone number is (571) 272-4521. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janet Andres, Ph.D., can be reached at (571) 272-0867.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CYW
January 11, 2007

JANET L. ANDRES
SUPERVISORY PATENT EXAMINER